

PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

REC'D 28 JAN 2004

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Applicant's or agent's file reference E-1639-03	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/50113	International filing date (day/month/year) 17.04.2003	Priority date (day/month/year) 19.04.2002
International Patent Classification (IPC) or both national classification and IPC B65D85/10		
Applicant G.D. SOCIETA PER AZIONI		

<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 4 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 7 sheets.</p>
<p>3. This report contains indications relating to the following items:</p> <p>I <input checked="" type="checkbox"/> Basis of the opinion II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application</p>

Date of submission of the demand 14.11.2003	Date of completion of this report 28.01.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer Fournier, J Telephone No. +31 70 340-1031



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/50113

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

3-8 as originally filed
1, 2 filed with telefax on 13.11.2003

Claims, Numbers

1-29 filed with telefax on 13.11.2003

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:
- the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP 03/50113

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

the entire international application,

claims Nos. 15-29
because:
 the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):
 the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
 the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
 no international search report has been established for the said claims Nos. 15-29

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

the written form has not been furnished or does not comply with the Standard.
 the computer readable form has not been furnished or does not comply with the Standard.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-14
	No: Claims	
Inventive step (IS)	Yes: Claims	1-14
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-14
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Examination: Claims 1-14:

Claim 1:

Nearest prior art: D1:US-A-4 784 261

D1 describes a heat seal transparent plastic packing material folded about an orderly group of packets of cigarettes to form a tubular wrapping. Graphics (a tax stamp) may be placed on the exterior of the tubular wrapping on the top side of the package.

Problem:

The problem solved by these claims is to provide a seal for sealing the flaps that does not interfere with the graphics.

Solution:

The flaps are sealed by melting the sheet of packing material to define at least one bead seal outwards of said graphics. D1 does not give any indication about how the tax stamp is placed on the tubular wrapping. Thus, the available prior art does not give any indication nor hint which could lead to the solution proposed in claim 1. Therefore, the subject-matter of claim 1 is new in the sense of Article 33(2) and involves an inventive step in the sense of Article 33(3) PCT.

Claims 2-14:

As these claims are dependent on claim 1, the subject-matter of each of these claims is new in the sense of Article 33(2) and involves an inventive step in the sense of Article 33(3) PCT.

BY FAX

- 1 -

METHOD OF PACKING PACKETS OF CIGARETTES, AND SHEET OF
PACKING MATERIAL FOR IMPLEMENTING SUCH A METHOD

TECHNICAL FIELD

5 The present invention relates to a method of packing
packets of cigarettes.

More specifically, the present invention relates to
a method of packing an orderly group of packets of
cigarettes in a sheet of packing material to form a
10 carton of cigarettes, to which the following description
refers purely by way of example.

BACKGROUND ART

Cartons of cigarettes normally comprise ten packets
of cigarettes arranged in an orderly parallelepiped-
15 shaped group, which is enclosed in a sheet of paper or in
a cardboard blank, and is then wrapped in a sheet of
transparent heat-seal plastic material, normally
polypropylene.

Each packet of cigarettes is printed on the outer
20 surface with the trademark and brand name of the
cigarettes, maker's details, and all compulsory
information required by law, and which, in particular,
comprises the content of the cigarettes and a government
health warning.

25 Since legal requirements vary from one country to
another, the information printed on the packet must be
adapted accordingly.

And the same also applies to cartons, so that the
carton packing material (sheet of paper or cardboard

blank) must be adapted to each individual country.

US4784261 discloses a cigarette package having a desired number of individual packets which are wrapped by a clear cellophane wrapper to provide a single package; 5 each of the individual packets contains a predetermined quantity of cigarettes. An advertising card is provided between the individual packets which in turn forms a part of the completed package upon wrapping of the package itself.

10 DISCLOSURE OF INVENTION

It is an object of the present invention to provide a method of packing packets of cigarettes, designed to reduce the cost of conforming with the legal requirements of individual countries.

15 According to the present invention, there is provided a method of packing packets of cigarettes as recited by Claim 1.

20 The present invention also relates to a sheet of packing material for implementing the packing method as claimed in Claim 1.

According to the present invention, there is provided a sheet of packing material as recited by Claim 17.

BRIEF DESCRIPTION OF THE DRAWINGS

25 A non-limiting embodiment of the present invention will be described by way of example with reference to the accompanying drawings, in which:

Figure 1 shows a view in perspective, with parts removed for clarity, of an orderly group of packets of

CLAIMS

1) A method of packing an orderly group (1) of packets (2) of cigarettes; the method comprising the 5 steps of folding a sheet (11) of heat-seal transparent plastic packing material about the orderly group (1) to form a tubular wrapping having two tubular portions (21) projecting with respect to the orderly group (1), each tubular portion (21) comprising four flaps (18b, 18c, 10 18d, 18f), folding each flap (18b, 18c, 18d, 18f) onto the orderly group (1), so as to at least partly superimpose said flaps (18b, 18c, 18d, 18f), and sealing the superimposed flaps (18b, 18c, 18d, 18f) to one another; the orderly group (1) being packed solely in the 15 sheet (11) of transparent packing material, so that the packets (2) are visible through the sheet (11) of packing material; the method being characterized in that at least an outer flap (18d) has a portion (19) bearing graphics (20) and said flaps (18b, 18c, 18d, 18f) are sealed by 20 melting the sheet (11) of packing material to define at least one bead seal (22, 23, 24, 25) outwards of said graphics (20).

2) A method as claimed in Claim 1, wherein said orderly group (1) has two main faces (8), two lateral 25 faces (9), and two end faces (10); said flaps (18b, 18c, 18d, 18f) being superimposed on said end faces (10).

3) A method as claimed in Claim 1 or 2, wherein said at least one bead seal (22, 23, 24, 25) defines an endless path (26) surrounding said graphics (20).

- 10 -

4) A method as claimed in Claim 3, wherein said endless path (26) is defined by a number of adjacent bead seals (22, 23, 24, 25).

5) A method as claimed in Claim 4, wherein said adjacent bead seals (22, 23, 24, 25) overlap.

6) A method as claimed in any one of Claims 3 to 5, wherein each said bead seal (22, 23, 24, 25) is located close to an edge of said orderly group (1).

7) A method as claimed in any one of Claims 1 to 6, 10 wherein said sheet (11) of packing material comprises a central panel (12), and two lateral panels (13) separated ideally from the central panel (12) by two ideal fold lines (14); the method comprising forming slits (16) along the lateral panels (13), and which extend between 15 the edges of the sheet (11) of packing material and said ideal fold lines (14) to define a number of portions (18a, 18b, 18c, 18d, 18e) defining said flaps (18b, 18c, 18d, 18f).

8) A method as claimed in Claim 7, wherein each slit 20 (16) is formed by cutting said sheet (11) of packing material.

9) A method as claimed in Claim 7, wherein each slit (16) is formed by cutting and blanking to remove part of the sheet (11) of packing material.

25 10) A method as claimed in Claim 8 or 9, wherein a portion (17) of said sheet (11) of packing material at one end of said slit (16) is thermally perforated and hardened.

11) A method as claimed in Claim 8 or 9, wherein an

- 11 -

adhesive label (27) is applied to said sheet (11) of packing material at one end of said slit (16).

12) A method as claimed in Claim 9, wherein each slit (16) is formed by cutting said sheet (11) of packing material, combined with melting the slit (16) at one end of the slit (16).

13) A method as claimed in Claim 9, wherein each slit (16) is formed by melting part of said sheet (11) of packing material.

10 14) A method as claimed in any one of Claims 7 to 13, wherein the sheet (11) is detached of packing material from a continuous web of heat-seal plastic material.

15 15) A sheet of packing material for implementing the method of packing an orderly group (1) of packets (2) of cigarettes as claimed in any one of Claims from 1 to 14; said sheet (11) being made of transparent heat-seal plastic material and being folded about the orderly group (1) to form a tubular wrapping having two tubular portions (21) projecting with respect to the orderly group (1), each tubular portion (21) comprising four flaps (18b, 18c, 18d, 18f); the flaps (18b, 18c, 18d, 18f) being superimposed and sealed to one another; the sheet (11) of packing material comprising a central panel (12), and two lateral panels (13) defining the projecting tubular portions (21) when the sheet (11) of packing material is folded about the orderly group (1) to form a tubular wrapping; the sheet (11) of packing material being characterized in that each lateral panel (13)

having slits (16) dividing the lateral panel (13) into adjacent portions (18a, 18b, 18c, 18d, 18e) defining said flaps (18b, 18c, 18d, 18f) of a respective projecting tubular portion (21); at least one of said portions (18a, 18b, 18c, 18d, 18e) having graphics (20).

16) A sheet of packing material as claimed in Claim 15, wherein each lateral panel (13) extends between a free edge of the sheet (11) of packing material and an ideal fold line (14).

10 17) A sheet of packing material as claimed in Claim 16, wherein each slit (16) has a first end located at said free edge, and a second end located between said free edge and said ideal fold line (14).

15 18) A sheet of packing material as claimed in Claim 17, wherein said second end is located at said ideal fold line (14).

19) A sheet of packing material as claimed in Claim 17 or 18, wherein, at said second end, each slit (16) is curved to prevent initiating a tear in said sheet (11) of packing material.

20) A sheet of packing material as claimed in Claim 18, wherein said second end of the slit (16) is defined by an opening (29) bounded by a curved endless edge.

25 21) A sheet of packing material as claimed in Claim 20, wherein said opening (29) is formed by blanking the sheet (11) of packing material.

22) A sheet of packing material as claimed in Claim 20, wherein said opening (29) is formed by melting the sheet (11) of packing material.

- 13 -

23) A sheet of packing material as claimed in Claim 19, wherein said second end of the slit (16) is in the shape of a curved hook (28).

24) A sheet of packing material as claimed in Claim 5 18, wherein each slit (16) is defined by a slot (30) having two opposite edges (31) connected by a curved side (32) at the second end.

25) A sheet of packing material as claimed in Claim 10 16 or 17, and comprising an adhesive label (27) at the second end of each slit (16) to prevent initiating a tear in said sheet (11) of packing material.

26) A sheet of packing material as claimed in Claim 15 16 or 17, and comprising a thermally hardened portion (17) of the sheet (11) of packing material at the second end of each slit (16) to prevent initiating a tear in said sheet (11) of packing material.

27) A sheet of packing material as claimed in any one of Claims 15 to 26, wherein said graphics (20) comprise a bar code.

20 28) A sheet of packing material as claimed in any one of Claims 15 to 27, wherein said graphics (20) are located on a non-transparent portion (19) of said sheet (11) of packing material.

25 29) A sheet of packing material as claimed in any one of Claims 15 to 28, wherein said sheet (11) is made of polypropylene.